Appendix A: Glossary of Terms

A

Algae: Small plants that lack roots, stems, flowers, and leaves; living mainly in water and using the sun as an energy source.

Algal bloom: Rapid growth of algae on the surface of lakes, streams, or ponds; stimulated by nutrient enrichment.

Alkalinity: A measurement of water's ability to neutralize acid.

Ammonium: A nitrogen compound, NH_4, having the chemical relations of a strongly basic element like the alkali metals.

Aquifer: A soil or rock formation saturated with water.

Atrazine: An herbicide used extensively for weed control for corn, sorghum, and sugarcane, and found frequently in streams and rivers, particularly following floods and periods of heavy rain; designated a "possible human carcinogen" by EPA.

B

Basin: The geographic area drained by a stream; also referred to as Drainage Basin or Watershed.

Benthic: The environmental setting and organisms associated with the bottom of a water body.

C

Chlorpyrifos: A broad-spectrum, organophosphate insecticide used to control foliage- and soil-borne insect pests on lawns and a variety of food, feed and ornamental crops; in residential settings it is used for lawn care, termite and mosquito control, indoor foggers and pet collars.

Conductivity: A measure of the ability of water to conduct an electrical current as measured using a 1-cm cell and expressed in units of electrical conductance (i.e., Siemens - S or ohms) at 25° C. Conductivity is related to the type and concentration of ions in solution and can be used to approximate the total dissolved solids (TDS) content of water by testing its capacity to carry an electrical current; conductivity corrected to 25° C is specific conductance.

D

Dissolved Oxygen (DO): The amount of oxygen dissolved in water. Adequate concentrations of dissolved oxygen are necessary for the life of fish and other aquatic organisms and the prevention of offensive odors. Dissolved oxygen levels are considered the most important and commonly employed measurement of water quality and indicator of a water body's ability to support desirable aquatic life. Generally, proportionately higher amounts of oxygen can be dissolved in colder waters than in warmer waters.

Drainage basin: The total land area drained by a stream. A drainage basin may be composed of many small watersheds; see also Basin and Watershed.

E

***E. coli* (Escherichia coli):** A bacterium of the intestines of warm-blooded organisms, including humans, that is used as an indicator of the presence of disease causing organisms.

Erosion: The wearing away of the land surface by physical and chemical processes.

Eutrophication: The process by which water bodies are enriched with nutrients (usually phosphorus and nitrogen) that generally result in excessive aquatic plant growth. Eutrophication can lead to low levels of dissolved oxygen. Natural eutrophication is the process of water body aging. Cultural eutrophication occurs when nutrients are added from agricultural runoff, sewage, or other sources.

F

Fecal coliform bacteria: The portion of the coliform group that is present in the gut or feces of warm-blooded animals. The presence of fecal coliform bacteria in water is an indication of pollution and potential human health problems.

G

Groundwater: Water in the pores and cracks in soil and rock below the land surface.

H

Habitat: The environmental setting in which an organism lives.

I-L

Inorganic compound: Any compound not containing carbon.

M

MCL (Maximum Contaminant Level): The allowable concentration of a compound in drinking water; EPA considers the properties of the compound, the known human health effects of the compound, the likely occurrence in drinking water, and the detection limit for the analytical method used to analyze a sample of drinking water when developing a MCL for a compound.

N

Nitrogen: An often limiting nutrient for plant growth in the aquatic environment. When nitrogen is present in a water body in high concentrations, algae can grow quickly, resulting in a depletion of dissolved oxygen.

NTU - Nephelometric Turbidity Units: a unit of measurement that indicates the depth that light can penetrate a water sample.

Nutrient: Any substance necessary for growth of living things.

O

Organic material: Any compound containing carbon.

P

Pesticide: A chemical agent used for the control of specific organisms, such as weeds and insects.

pH: The measurement of acidity or alkalinity on a scale of 0 - 14. A pH of 7 is neutral while a pH lower than 7 is acid and a pH higher than 7 is alkaline (basic).

Phosphorus: An essential plant nutrient that in excessive quantities can contribute to the eutrophication of water bodies.

Photosynthesis: Process by which green plants use sunlight to produce food or energy.

Point source pollution: Pollutants originating from an identifiable "point" source, such as a pipe, vent, or culvert.

Probe: A device that contains one or more sensors that collect water quality data; a probe usually is placed in a sonde.

Q

QA/QC (Quality Assurance/Quality Control): The process by which data accuracy and precision are evaluated in a scientific inquiry. In laboratory water analyses, the process often includes performing duplicate tests and testing samples that contain a known concentration of a compound.

R

Real-time data: Data that depict conditions in the present. These data may be displayed immediately after they are collected or after a short time-delay depending on the equipment used to process the data.

River corridor: Land areas with physical characteristics, such as vegetation, that show the direct influence of a body of water. Steam sides, lake borders, and marshes are typical river corridor areas.

Runoff: Water from rain, snowmelt, or irrigation that flows over the ground surface and runs into a water body.

S

Sediment: Soil, sand, and minerals deposited in a water body.

Sonde: A torpedo-shaped device placed in water to gather water quality data. Sensors that collect water quality data are placed in probes that are then placed in a sonde.

Stormwater: The water and associated material draining into streams, lakes, or sewers as the result of a storm.

Storage: The volume of water detained in a drainage basin in groundwater, channel storage, and depression storage. The terms "drainage basin storage" and "basin storage" sometimes are used to describe the volume of water in natural storage in a drainage basin.

Surface water: Waters that are exposed naturally to the atmosphere. Examples include rivers, lakes, reservoirs, ponds, streams, impoundments, seas, and estuaries.

T

Total dissolved solids (TDS): A measure of the concentration of material (mostly inorganic salts) dissolved in water. High concentrations of TDS can lead to discolored water with unpleasant tastes or odors and can sometimes affect the quality of drinking water. TDS cannot be removed by filtering.

Total suspended solids (TSS): Whole particles, such as silt, sand, or small algae or animals that are carried or suspended in the water and cause discoloration of the water. These substances can be removed from the water by a filter.

Toxicity: A measurement of how harmful a substance is to plants and animals.

Turbidity: Dissolved or suspended solids in water that make the water unclear, murky, or opaque.

U-V

Urban runoff: Water that drains from the surfaces such as roofs, paved roads, and parking lots in subdivisions.

W-Z

Water chemistry: The study of the chemical reactions in surface water and groundwater. The study of microbial activity and its effect on surface water and groundwater often is included in water chemistry studies.

Water quality: The condition of the water with regard to the presence or absence of pollution.

Watershed: The surface drainage area that contributes water in a stream or river at a specific location. Also see "basin" and "drainage basin."